

REMARKS

In the Action, claims 1-7 and 15-27 are rejected. In response, claims 1, 3, 4 and 7 are amended, and new claims 28-34 are added.

Independent claims 1 and 4 are amended to clarify the features of the claimed method for the spontaneous and rapid release of a fragrance. New claims 28-30 depend from claim 4 and further define the compound of the fragrance precursor. Claim 31 depends from claim 4 and recites the step of increasing the water content to dissociate and release the fragrance when the medium is alkaline and has a water content of less than 10 wt%. Claim 32 depends from claim 1 and recites the step of preparing a stable formulation of the compound of formula I in an acid and oxidative medium ≤ 10 wt% less water. Claims 33 and 34 are supported by Example 29. These amendments are supported by the specification and claims as originally filed.

In view of these amendments and the following comments, reconsideration and allowance are requested.

The Rejections

The claims are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,627,763 to Anderson et al., U.S. Patent No. 6,207,857 to Anderson et al., Australian Patent No. 71940/94 to Paget et al., WO 03/017952 to Schmenger et al. and its U.S. equivalent, U.S. Patent Publication No. 2004/0098815, U.S. Patent No. 5,879,669 to Clausen et al., and U.S. Patent No. 5,895,780 to Tokosh et al. The Action does not address the claims individually, but instead draws a general conclusion that all of the claims are obvious. The Action does not identify which of the six cited patents are applied to any one of the claims. Accordingly, the Action has failed to establish prima facie obviousness.

The Action appears to rely on Anderson '763 and Anderson '857 for disclosing precursor compounds that decompose to release a fragrance. As recognized in the Action, Anderson '763 and Anderson '857 do not disclose the claimed method or the compounds used in the claimed method.

The Action asserts that Paget et al. discloses a detergent composition that contains the compounds of the claimed method. This position in the Action is clearly incorrect. As noted by the Examiner, Y of Paget et al. can be a C₇-C₂₄ alkyl radical. However, as clearly shown in the formula I of Paget et al., Y is coupled directly to the carbonyl group. In the claimed invention, R² is coupled to the carbonyl group and is specifically defined as being a C₁-C₄ alkyl group or a C₂-C₄ alkylene group. Thus, the group Y of Paget et al. does not correspond to the R² group of the claimed invention. Paget et al. does not disclose the compounds of the claimed method as asserted in the Action. The fragrance precursor compound of formula I of the method of claims 1 and 4 specifically excludes the compounds of Paget et al. and the compound according to Paget et al. specifically excludes the compound of formula I of claims 1 and 4.

Furthermore, the teachings of Paget et al. are limited to perfuming fabrics washed in a wash water in the presence of a lipase-containing detergent. See, for example, claim 1 of Paget et al. The usual process of washing fabrics with detergents does not include a compound of formula I in an acid and oxidative medium having a water content of ≤ 10 wt% and the step of raising the pH to 8.5 as in claims 5 and 32.

The method of amended claim 1 is directed to the spontaneous and rapid release of a fragrance from a formulation. As disclosed in the present specification, the present invention overcomes the disadvantages of the prior methods and compounds, and particularly the slow release of the prior methods disclosed on page 4, lines 5-11. The method provides a fragrance precursor as defined by formula I in a stable medium and treating the formulation to disintegrate and rapidly

release the fragrance by rapid hydrolysis of the compound of formula I. The cited patents do not disclose or suggest the claimed method for the rapid release of the fragrance of a compound defined by formula I in independent claims 1 and 4. The cited patents do not disclose or suggest the fragrance precursor compound as defined by formula I used in the claimed method. Instead, the cited patents specifically disclose compounds to provide a slow release of the fragrance and specifically tailor the structure of their starting compounds to provide the required slow release.

Anderson '763 and Anderson '857 do not disclose or suggest the fragrance precursor of the claimed method that is (1) stable in the presence of a medium which is oxidative and acidic, and (2) releases a fragrance when the pH is raised to 8.5 or higher. Anderson only provides a non-specific teaching that the fragrance precursor compounds are activated by conditions comprising acid or alkaline pH. (See Anderson '857, column 3, lines 49-50, column 6, lines 40-41, claim 2, and Anderson '763, column 3, line 20, and column 10, line 48).

Anderson '763 and Anderson '857 provide only a limited number of examples where the pH of the composition is disclosed, namely, Example 56 of Anderson '763 and Example 12 of Anderson '857. Both examples disclosed are acidic pH of the finished product from which the fragrance is released. The products are fabric softeners. Applicants respectfully submit that processes for treating a fabric with a fabric softener do not comprise a step of raising the pH to 8.5 or higher. The activation of the fragrance precursor of Anderson '763 and Anderson '857 is not achieved by changing the pH, but instead is due to the presence of the enzymes as disclosed in Anderson '857, column 3, line 48, column 39, claim 2, and Anderson '763, column 3, line 19 and column 10, line 47. Anderson '763 and Anderson '857 specifically disclose the fabric softeners as "enzyme containing consumer products".

Anderson '763 relates to a starting compound that is clearly different from the compound or the claimed method for the spontaneous and rapid release of a fragrance precursor. As recognized in the Action, Anderson '763 discloses different starting compounds. The compounds of Anderson '763 decompose by a first step into a hydroxy ester having the formula Y-H as disclosed in column 4. The hydroxy ester then decomposes into one or more organoleptic lactones and one or more alcohols, amines, aldehydes and/or ketones. Thus, Anderson '763 is specifically directed to a two stage decomposition, thereby providing the required slow release of the organoleptic lactones.

Furthermore, the formula of the compound in Anderson '763 has no relation to the claimed invention. The group Y as defined by Anderson '763 and the group Z clearly result in compounds that are unrelated to the claimed invention. The compounds of Anderson '763 do not correspond to the fragrance precursor of independent claims 1 and 4. The group Z of Anderson '763 is a protecting group which must be removed in a first step to provide the hydroxy ester. The precursor compound of Anderson '763 cleaves two hydroxyl groups to provide the slow release of the compound. Anderson '763 specifically describes the process as being a slow release of the active agents by the two stage decomposition mechanism. Thus, the mechanism for release the fragrance of Anderson '763 is different from the mechanism according to the claimed method.

Anderson '857 also does not disclose the compounds according to the claimed method. The groups defined by X and R² of formula I of Anderson '857 are not a branched or unbranched C₁-C₄ alkyl or a branched or unbranched C₂-C₄ alkylene as recited in claims 1 and 4. The group X as defined in Anderson '857 has a divalent hydrocarbon residue that can contain one or more heteroatoms. R², which is coupled directly to the X group, is a carbocyclic or heterocyclic residue or COOY group. Thus, the precursor compounds of Anderson '857 are clearly different from the compounds of the claimed method. Furthermore, the compounds according to Anderson '857

behave differently and decompose by a different mechanism. None of the starting compounds disclosed in Anderson '857 correspond to the compounds of formula I according to claims 1 and 4. The compounds according to Anderson '857 do not correspond to the compounds of the claimed invention where R^2 is a C_1 - C_4 alkyl or a C_2 - C_4 alkylene group. Anderson '857 only discloses that where X is a divalent hydrocarbon residue, R^2 must be a carboxylic group or a heterocyclic moiety or a carboxyl group.

It would not have been obvious to one skilled in the art to replace the compounds of Anderson '763 or Anderson '857 with the compounds of Paget et al. since the compounds of Paget et al. do not decompose by the same or a similar mechanism of the two-stage decomposition of the Anderson patents, and thus, would not provide the intended slow release of the Anderson patents. As noted above, Paget et al. does not disclose the compounds according to the claimed invention as asserted in the Action. The compounds according to Paget et al. require the group Y to be a C_7 - C_{24} alkyl radical. In contrast, the compounds of the claimed invention recite R^2 being a C_1 - C_4 alkyl or a C_2 - C_4 alkylene group. Thus, even if one were to substitute the compounds of Paget et al. for the compounds of Anderson '857 and Anderson '763, the resulting method would clearly not be the claimed invention. The resulting combination would not be a method of providing a composition containing the fragrance precursor compound as defined by formula I. The Examiner has not provided adequate basis for the position that it would have been obvious to replace the compounds of the Anderson patents with the compounds of the claimed method. Accordingly, independent claims 1 and 4 are not obvious over the combination of the cited patents.

The cited patents also fail to disclose the claimed method where the composition is an acidic and oxidative medium having a water content of 10 wt% or less relative to the total mass of the medium. The Action fails to identify where the cited patents disclose an acidic and oxidative

medium and having a water content of 10 wt% or less. The cited patents further fail to disclose the step of treating the formulation to rapidly release the fragrance from the formulation as recited in claims 1 and 4.

As noted above, Anderson '763, Anderson '857 and Paget et al. do not disclose the compounds of formula I as used in the claimed method. Thus, the cited patents clearly fail to disclose the compounds where R^2 is as defined in dependent claims 2 and 3 either alone or in combination with the method of claim 1.

The art of record further fails to disclose the claimed method where the precursor is in an acidic and oxidative medium and activating to rapidly release the fragrance by raising the pH to 8.5 or more. The cited patents further fail to disclose the method where the medium is alkaline and the step of raising the water content to greater than 10 wt% to rapidly release the fragrance.

Accordingly, claims 6 and 7 are not obvious over the art of record.

Schmenger et al., Clausen et al. and Tokosh et al. appear to be cited for disclosing various hair and coloring compositions. Schmenger et al. appears to be cited for disclosing a coloring agent for keratin fibers. Applicants submit that it would not have been obvious to use the fragrance precursors of the Anderson patents or Paget et al. in the hair coloring composition of Schmenger et al. Hair color agents are a specific class of personal care products due to (1) the acid and oxidative media present in the developer, (2) the ammonia in the coloring composition, and (3) the drastic pH change that occurs when the acid and oxidative medium is combined with the ammonia-containing coloring composition. For this reason, one skilled in the art would not consider a fragrance used in other personal care products such as those disclosed in the Anderson patents would be suitable in a hair coloring composition.

Schmenger et al. only discloses the use of a perfume. Nothing suggests the use of a fragrance precursor that enables the release of a fragrance at the time of mixing the two components. It is this time when the fragrance is needed to mask the unpleasant odor of ammonia. Due to the limited storage stability of perfumes, the perfume of Schmenger et al. will likely not suppress the odor of the ammonia at the time of use.

The Anderson patents disclose a number of personal care products but do not disclose hair coloring agents. The Anderson patents provide no suggestion to one skilled in the art to use the compounds in a hair coloring composition.

Clausen et al. appears to be cited for disclosing ammonia and a thickener for hair fixing compositions. Tokosh et al. is cited for disclosing a soap comprising sodium tallowate and sodium cocoate. Although not specifically stated in the Action, these patents appear to be cited in connection with the dependent claims. The Action has not provided an adequate basis for the position that it would have been obvious to one skilled in the art to use the compounds of Anderson '857, Anderson '763 and Paget et al. in a hair coloring composition as in claim 15, a deodorant or antiperspirant as in claim 16, a hair coloring composition as in claims 21-25, either alone or in combination with the features of claim 4. Even if one were to combine the cited patents, the resulting method would not be the claimed invention for the reasons discussed above.

As discussed above, the invention as claimed is directed to the rapid release of a fragrance. In contrast, the cited patents are directed specifically to the slow release of a fragrance. Thus, the cited patents clearly fail to teach a method where 91 to 100% of the fragrance precursor hydrolyses to aldehydes after five minutes as in claim 26.

In view of these amendments and the above comments, the claims are submitted as being allowable over the art of record. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,



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